

The Effect of Collector Aspect Ratio on the Collector Efficiency of Upward-Type Flat-Plate Solar Air Heaters

The effect of collector aspect ratio on the collector efficiency of upward-type flat-plate solar air heaters has been investigated theoretically and experimentally. The theoretical predictions agree reasonably well with experimental results. With constant collector area, the collector efficiency increases with the collector aspect ratio. Considerable improvement in collector efficiency of solar air heaters is obtained with air flowing over, instead of under, the absorbing plate.